

SUPPORT FOR THE AMENDMENTS

The amendment to Claim 1 is supported by the specification, particularly by page 7, lines 3-6 and page 8, lines 6 to 24. No new matter is believed to have been added to the present application by the amendments submitted above.

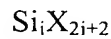
REMARKS

Claims 1-10 are pending, with Claims 1 and 7-10 under active consideration.

Favorable reconsideration is respectfully requested.

The present invention relates to a silane polymer obtained by applying radiation containing light having a wavelength of 360-420 nm to at least one silane compound having photopolymerizability selected from the group consisting of:

a chain silane compound represented by the formula:



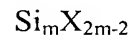
(X is a hydrogen atom or halogen atom and i is an integer of 2 to 10),

a chain silane compound represented by the formula:



(X is a hydrogen atom or halogen atom and j is an integer of 3 to 10),

a chain silane compound represented by the formula:



(X is a hydrogen atom or halogen atom and m is an integer of 4 to 10),

a chain silane compound represented by the formula:



(X is a hydrogen atom or halogen atom and k is an integer 6, 8 or 10), and having a weight average molecular weight in terms of polystyrene measured by gel permeation chromatography of 800-5,000. See Claim 1.

The rejection of the claims under 35 U.S.C. §102(b) over Nishida et al. is respectfully traversed. Nishida et al. disclose a silane polymer having a methyl group and phenyl group which is synthesized from methylphenyldichlorosilane. The reference fails to disclose the claimed silane polymer obtained by applying radiation having a specific wavelength to a

specific silane compound as specified in Claim 1. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §102(b) over Choi et al. is respectfully traversed. Choi et al. disclose a silane polymer having a phenyl group which is synthesized from a phenylsilane. The reference fails to disclose the claimed silane polymer obtained by applying radiation having a specific wavelength to a specific silane compound as specified in Claim 1. Accordingly, withdrawal of this ground of rejection is respectfully requested.

The rejection of the claims under 35 U.S.C. §102(b) over Sato et al. is respectfully traversed. Sato et al. disclose a large number of silane polymers having an aryl group, alkyl group, cycloalkyl group, etc. The reference fails to disclose the claimed silane polymer obtained by applying radiation having a specific wavelength to a specific silane compound as specified in Claim 1. Accordingly, withdrawal of this ground of rejection is respectfully requested.

An IDS is submitted herewith for a notification of reasons for refusal issued in the corresponding Japanese application.

The cited document 1 (JP-A-2002-97414) discloses a method of manufacturing a silicon polymer by reacting a halogenosilane compound with metal lithium or metal magnesium (see Claim 3).

The cited document 2 (US 4,704,444) discloses a method of manufacturing a polyhydride silane by reacting a dihalogenosilane with the group IA or IIA metal or alloy of the periodic table (see column 6, lines 40-52).

The cited document 3 (US 5,866,471) discloses a method of manufacturing a dichlorosilane with metal lithium or metal sodium (see Examples 1 and 2).

The cited document 4 (JP-A-7-300529) discloses a method of manufacturing a polysilane by dehydrogenating and condensing a trihydrosilane in the presence of a zirconocene or titanocene catalyst (see [0012] to [0015] and Examples 1-5).

The cited document 5 (JP-A-5-32785) discloses a method of manufacturing a polysilane by dehydrogenating and condensing a hydrosilane in the presence of a lanthanoid catalyst (see Claim 1 [0005] and Examples 1-15).

The cited documents 1-5 in the corresponding Japanese application fail to disclose or suggest a silane polymer obtained by applying radiation having a specific wavelength to a specific silane compound claimed in Claim 1.

In the notification in the corresponding Japanese Application, the cited document 6 (JP-A-2003-124486) discloses that a polysilane compound is synthesized by applying light from a light source having a wavelength of 170-160 nm to a silane compound (see [0012] to [0015]) and that a white solid insoluble in toluene and cyclohexane is manufactured by applying light from a 500 W high-voltage mercury lamp to cyclopentasilane (see [0047]).

The cited document 7 (JP-A-2003-313299) discloses a method of manufacturing a high-order silane compound by applying ultraviolet radiation having a wavelength of 250 nm or more, preferably 300 nm or more to a liquid silane compound having photopolymerizability (Claims 1 and 6 and [0034]) and that a high-order silane compound was manufactured by applying ultraviolet radiation having a wavelength of 308 nm (Examples 1-5), 436 nm (Examples 6 and 7), 254nm (Examples 8 and 9) or 172 nm (Examples 10 and 11) (see [0064] and [0069]).

As described above, the cited documents 6 and 7 fail to disclose use of ultraviolet radiation having a specific wavelength range of 360-420 nm used in the present invention in Claim 1 of the present application.

Table 2 in the page 21 of the present application shows observations results when silicon polymers were manufactured by applying ultraviolet radiation having some different wavelengths. Out of these, Nos. 4, 5 and 6 were obtained by applying ultraviolet radiation having a wavelength of 405 nm and had a good results (the present invention)(further refer to lines 29 of page 23 to line 5 of page 24). In contrast to this, Nos. 7, 8 and 9 were obtained by applying ultraviolet radiation having a wavelength of 436 nm (Comparative Examples). In these Comparative Examples, though the polymerization rate was low and small amount of a polymer was formed, a milky solution was obtained (further refer to lines 22 to 28 of page 23).

Although Nos. 2 and 3 were obtained by applying ultraviolet radiation having a wavelength of 365 nm and correspond to the present invention, a milky solution was obtained. Although a polymer was formed by a 5 minutes or 10 minutes of UV application (see lines 22 to 28 of page 23, it is expected that a desired polymer will be formed by reducing the application time.

As described above, the cited documents 6 and 7 fail to disclose or suggest that the predetermined effect of the present application is obtained at specific wavelength range specified in Claim 1.

Further, in the notification the cited document 8 (JP-A-2002-350155/JP-A-2004-186320) discloses that a high-order silane is obtained by applying radiation including light having a wavelength of 150-450 nm to a silane compound (see [0029] to [0035]) and that light from a 500 W high-voltage mercury lamp was applied to cyclopentasilane for 20 minutes (see [0083]).

However, the cited document 8 fails to disclose Examples in which radiation having a wavelength of 360-420 nm is applied and that a silane polymer having a weight average molecular weight of 800-5,000 is obtained thereby.

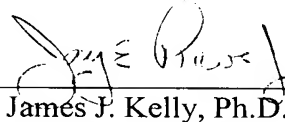
That is, the cited document 8 fails to disclose or suggest a silane polymer which is obtained by applying radiation having a specific wavelength to a specific silane compound claimed in Claim 1.

As described above, all the cited documents mentioned in the outstanding Office Action and the cited documents mentioned in the Notification Reasons for the Refusal of the corresponding Japanese application fail to disclose or suggest a silane polymer obtained by applying radiation having a specific wavelength to a specific silane compound claimed in Claim 1.

Applicants submit that the present application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,

OBLON, SPIVAK, McCLELLAND,
MAIER & NEUSTADT, P.C.



James J. Kelly, Ph.D.
Attorney of Record
Registration No. 41,504

Customer Number
22850

Tel: (703) 413-3000
Fax: (703) 413 -2220
(OSMMN 08/07)

Jay E. Rowe, Jr.
Registration No. 58, 948